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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,110	06/14/2001	Kaushik Ghosh	Juniper-12 (JNP-0106)	7923

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EXAMINER

PHAN, TRI H

ART UNIT PAPER NUMBER

2661

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/881,110

Applicant(s)

GHOSH ET AL.

Examiner

Tri H. Phan

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 and 34-48 is/are pending in the application.
- 4a) Of the above claim(s) 32 and 33 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-31 and 36-47 is/are allowed.
- 6) ☐ Claim(s) 1-13, 15, 34, 35 and 48 is/are rejected.
- 7) ☐ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment/Arguments*

1. This Office Action is in response to the Response/Amendment filed on May 25<sup>th</sup>, 2005. Claims 32-33 are now canceled and new claim 48 are added. Claims 1-31 and 34-48 are now pending in the application.

### *Claim Rejections - 35 USC § 101*

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 34-35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 34-35 are rejected under 35 U.S.C. 101 because the disclosed invention is within a non-statutory class of invention. Claims 34-35 are directed to the data structure with parameter ... sampling of addressed data, next hop and state information, forwarding table with entries, such as next hop index and next hop interface; which is considered as non-statutory subject matter, i.e., results in a claim which is not a proper descriptive material's claim that is not defined functional interrelationships between the data structure, which is limited to the practical application under 35 U.S.C. 101. See for example *MPEP*, Section 2105-1 and

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<http://www.uspto.gov/web/offices/com/hearings/software/analysis/> under Section Non-Statutory

Subject Matter of the claimed invention complies with 35 U.S.C. § 101.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claim 1, it recites the method for controlling sampling of addressed data; wherein the step of “*forwarding the samples*”, when determining that the state is stable, is without knowing where to forward to, e.g. there is no mention of the destination; which leaves a doubt as to the scope of protection sought.

Claim 34 provides the “data structure stored in the machine-readable medium”, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. The claim is indefinite where it merely recites the data structure stored in the machine-readable medium without any active, positive steps delimiting how this use is actually practiced.

***Claim Rejections - 35 USC § 103***

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Boivie et al.** (U.S.6,625,773; hereinafter refer as '**Boivie**') in view of **Li, Yunzhou** (U.S.6,791,980; hereinafter refer as '**Li**').

As to claim 1 Boivie teaches about a method for controlling the sampling of addressed data, the method comprising: a) ... of next hop information defining a destination for samples of addressed data (col. 2, lines 42-43, determining a next hop for each of the destination nodes listed in the packet received); b) if it is determined ... of the next hop information is... then i) generating samples from the addressed data (col. 2, lines 47-48, replicating the packet...), and ii) forwarding the samples based on the next hop information (col. 2, lines 54-56, transmitting the replicated copies of the packet to each of the next...), and c) if it is determined ... of the next hop information is ..., then not forwarding samples. Boivie does not teach that the state of the next hop information is stable or not stable, but Li teaches (col. 7, lines 45-54, if the policy route is accepted or rejected, that is to say, stable or not stable, the logic determines the next route is stable and the packet is forwarded to the next step; otherwise, the logic determines not to forward the packet). It would have been obvious to one of ordinary skill in the art to combine Boivie with Li for the purpose of determining information about whether or not the state of next hop

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information is stable or not stable. The motivation is to avoid unnecessary bandwidth usage by duplicating and transmitting packets without predetermining the state of the receiving end.

As to claims 2 and 3, in addition to features in base claim 1 (see rationales pertaining the rejection of base claim 1 discussed above), Boivie further discloses the method of sample generating (col. 2, lines 47-48, replicating packets), but does not specifically teach dropping samples generated. Li teaches that a packet is dropped if the next route is determined as a rejected route or as an unstable route (col. 7, lines 51-54, when the policy route is the rejected route, the packet is dropped). It would have been obvious to one of ordinary skill in the art to combine Boivie with Li for the purpose of dropping samples generated if the next hop information is not stable. The motivation is that by dropping packets with no stable next hop information, the sender is minimizing resource usage such as memory, which implies minimizing packet retrieving time in the network.

As to claim 4, in addition to features in base claim 1 (see rationales pertaining the rejection of base claim 1 discussed above), Boivie further discloses wherein the addressed data are packets (col. 2, line 56, routing ...addresses included in each packet).

As to claim 9, in addition to features in base claim 1 (see rationales pertaining the rejection of base claim 1 discussed above), Boivie further discloses wherein the next hop information is associated with a next hop destination address (col. 4, lines 20-23, ...to determine the next hop of each of the destinations listed).

As to claim 10, in addition to features in base claim 1 (see rationales pertaining the rejection of base claim 1 discussed above), Boivie further discloses wherein the act of determining a state of next hop information defining a destination for samples of addressed data includes reading a state flag (implicitly taught because in order to determine the next hop's condition, a router looks at a forwarding table for a flag that indicates the route's or the interface's condition).

As to claim 11, in addition to features in base claim 1 (see rationales pertaining the rejection of base claim 1 discussed above), Boivie further discloses wherein the state flag is stored in a hardware register (col. 7, lines 30-33, instructions are stored in a memory device; a memory device is a bundle of registers in one packet).

As to claims 12-13 and 15, in addition to features in base claim 1 (see rationales pertaining the rejection of base claim 1 discussed above), Boivie further discloses that the act of generating samples from the addressed data is performed based on parameters (col. 2, lines 48-49, 54-56; col. 4, lines 24-25, the first parameter is to duplicate the original packet once for each next hop destination address; and where the applications programs are written through the program codes as disclosed in col. 7, lines 47-50, e.g. "*user configured*" as claimed in the claim invention 13, and wherein the "*counting parameter*" step is obvious for replicating the copy for each of the next hop as claimed in the claim invention 15).

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7. Claims 5-8 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Boivie et al.** (U.S.6,625,773) in view of **Li, Yunzhou** (U.S.6,791,980), and further in view of **Zhang, Zhaohui** (U.S.6,275,492; hereinafter refer as '**Zhang**')

As to claims 5 and 7, in addition to features in base claim 1 (see rationales pertaining the rejection of base claim 1 discussed above), neither Boivie nor Li teach that the next hop information includes a name associated with an interface, but Zhang teaches (col. 4, lines 10-15, table 1 indicates the next hop information with the destination node name N1). It would have been obvious to one of ordinary skill in the art to combine Boivie and Li with Zhang for the purpose of having next hop information that includes index or name that is associated with an interface. The motivation is to have next hop information with a destination name included in the information so that way the packet sending router could tell the packet is forwarded to the end terminal.

As to claims 6 and 8, in addition to features in base claims 1, 5, and 7 (see rationales pertaining the rejection of base claims 1, 5, and 7 discussed above), neither Boivie nor Li teach wherein a link terminated by the interface defines a point-to-point connection with a sample destination device, but Zhang discloses (col. 3, table 1 shows a point-to-point connection between node N1 and router R1). It would have been obvious to one of ordinary skill in the art to combine Boivie and Li with Zhang for the purpose of having information that includes a point-to-point connection with a sample destination device. The motivation is to make sure the next



hop is the packet destination point so that the packet duplication process begins; this way bandwidth usage is minimized.

As to claim 48, in addition to features in base claim 1 (see rationales pertaining the rejection of base claim 1 discussed above), neither Boivie nor Li teach wherein the samples are network analysis samples, but Zhang discloses about the network analysis samples ('data packet analysis code'; col. 6, line 48-58). It would have been obvious to one of ordinary skill in the art to combine Boivie and Li with Zhang, for providing the information to other network devices in the network without required tag's binding and tag-route pairs' advertisement as disclosed in col. 2, lines 7-12.

***Response to Amendment/Arguments***

8. Applicant's arguments filed on May 25<sup>th</sup>, 2005 have been fully considered but they are not persuasive.

In regard to claim 1, Applicant mainly argues that the combination of **Li** and **Boivie** fails to disclose about "*sampling*" of addressed data as with the ordinary meaning of the act of collecting elements or parts of, e.g. addressed data. Examiner respectfully disagrees. The combination of **Li** and **Boivie** discloses about the system and method for multicast communications in packet switched network; wherein the collecting information and addresses for forwarding packets is obvious in routing technique. **Li** also discloses wherein the router collects, configures and distributes the policy routes to the other routers in the domain as

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disclosed in col. 4, lines 31-56, through the use of Policy Bootstrap message. Therefore, Examiner concludes that combination of **Li** and **Boivie** teaches the arguable feature.

Claims 2-13, 15, and 48 are rejected as in Part 6 and 7 above of this Office action and by virtue of their dependence from claim 1.

*Allowable Subject Matter*

9. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri H. Phan, whose telephone number is (571) 272-3074. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on (571) 272-3126.

**Any response to this action should be mailed to:**

**Commissioner of Patents and Trademarks**

Washington, D.C. 20231

**or faxed to:**

**(571) 273-8300**

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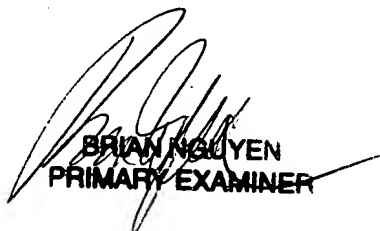
Hand-delivered responses should be brought to Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tri H. Phan  
September 2, 2005



BRIAN NGUYEN  
PRIMARY EXAMINER